CHAPTER 1

INTRODUCTION

1-1. Purpose

The purpose of this manual is to describe a pavement maintenance management system (PAVER) for use at military installations. This system is available in either a manual or computerized mode. The maintenance standards prescribed should protect Government property with an economical and effective expenditure of maintenance funds commensurate with the functional requirements and the planned future use of the facilities. The majority of pavements on Army installations were built many years ago, and thus, many have reached their economic design life. Because of limited maintenance funds, timely and rational determination of maintenance and repair (M&R) needs and priorities are very important factors. These factors can be determined by using PAVER as described in this manual. The use of PAVER by personnel who have the responsibility for pavement maintenance should assure uniform, economical, and satisfactory surfaced area maintenance and repair. When information in this publication varies from that contained in the latest issue of Federal or Military specifications, the specifications shall apply. Reference to Federal, Military or other specifications is to the current issues of these specifications as identified by their basic number(s).

1-2. Applicability

This manual applies to Army elements responsible for maintenance and repair (M&R) of asphalt or concrete-surfaced roads, streets, parking lots, and hardstands. Airfield pavement management is covered by AFR 93-5 which becomes part of this manual by reference. (See app A.)

1-3. Scope

The system presented in this manual consists of the following components:

a. Network identification. The process of dividing installation pavement networks into manageable segments for the purpose of performing pavement inspection and determining M&R requirements and priorities (chap 2).

b. Pavement condition inspection. THE process of inspecting installation pavement to determine existing distresses and their severity and to compute the pavement condition index (PCI)-a rating system that measures the pavement integrity and surface operational condition (chap 3).

c. M&R determination. The process of establishing M&R requirements and priorities based on inspection data, PCI, and other relevant information such as traffic, loading, and pavement structural composition (chap 4).

d. Economic analyses of M&R alternatives. The process of using life-cycle cost analysis to rank various M&R alternatives (chap 5).

e. Data management. A manual system (card system) for handling data is described in chapter 6. An automated system is described briefly in chapter 7.

1-4. Implementation of PAVER

The level of implementation is a function of the installation size, existing pavement condition and available manpower and money resources. The highest level of implementation would be the inclusion of all pavements on the installation and use of the automated system. The lowest level would be use of the PCI as the basis for project approvals and establishment of priorities. A gradual implementation may be practical for many installations. This includes starting with a specific group of pavements at the installation (such as primary roads and pavements experiencing a high rate of deterioration or requiring immediate attention) and then including other pavements on a predefined schedule. Technical advise concerning any procedures outlined in this manual may be obtained from US Army Facilities Engineering Support Agency, ATTN: FESA-EB, Fort Belvoir, VA 22060.

1-5. PAVER forms

DA Forms 5145-R through 5156-R (figs E-1 through E-13) used for PAVER and described hereafter in this manual will be reproduced locally on 8½ by 11-inch paper. Appendix E contains blank reproducibles.